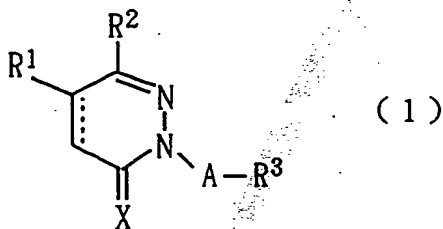


CLAIMS

- 1           1. A pyridazine derivative represented by the  
2 following formula (1):



4 wherein R<sup>1</sup> represents a substituted or unsubstituted  
5 aryl group, R<sup>2</sup> represents a phenyl group substituted at  
6 least at 4-position by a lower alkoxyl group, a lower  
7 alkylthio group, a lower alkylsulfinyl group or a lower  
8 alkylsulfonyl group, and optionally has one or more  
9 substituents at the remaining positions, R<sup>3</sup> represents  
10 a hydrogen atom, a lower alkoxyl group, a halogenated  
11 lower alkyl group, a lower cycloalkyl group, a sub-  
12 stituted or unsubstituted aryl group, a substituted or  
13 unsubstituted aryloxy group, a substituted or un-  
14 substituted, nitrogen-containing heterocyclic ring  
15 residue, a substituted or unsubstituted aminocarbonyl  
16 group, or a lower alkylcarbonyl group, A represents a  
17 single bond or a linear or branched lower alkylene  
18 group or lower alkenylene group, X represents an oxygen  
19 atom or a sulfur atom, and the dashed line indicates  
20 that the carbon-carbon bond between the 4-position and

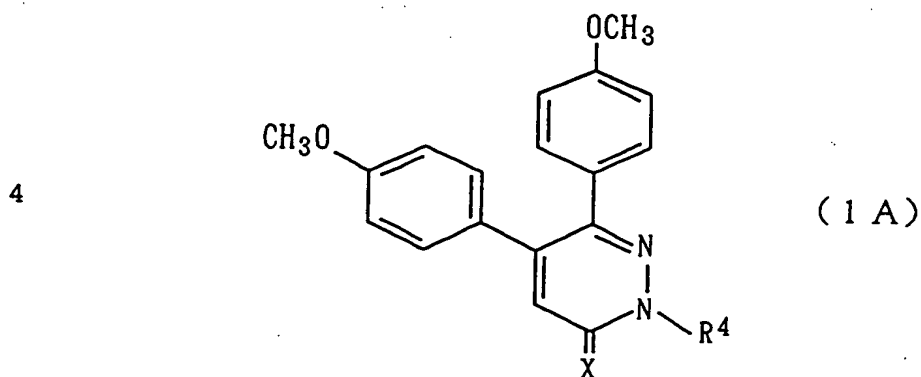
21 the 5-position is a single bond or a double bond, with  
22 the proviso that A is a single bond when R<sup>3</sup> is a  
23 halogenated lower alkyl group and that the following  
24 combinations are excluded: R<sup>1</sup> and R<sup>2</sup> are 4-  
25 methoxyphenyl groups, X is an oxygen atom, the carbon-  
26 carbon bond at the 4-position and the 5-position is a  
27 double bond, A is a single bond, and R<sup>3</sup> is a hydrogen  
28 atom or a 2-chloroethyl group; or a salt thereof.

1 2. A pyridazine derivative or a salt thereof ac-  
2 cording to claim 1, wherein R<sup>1</sup> represents a substituted  
3 or unsubstituted phenyl or pyridyl group.

1 3. A pyridazine derivative or a salt thereof ac-  
2 cording to claim 1, wherein R<sup>1</sup> represents a phenyl or  
3 pyridyl group which may be substituted by 1 to 3 sub-  
4 stituents selected from halogen atoms and lower alkoxy  
5 groups; R<sup>2</sup> represents a phenyl group, which may be sub-  
6 stituted at 4-position by a lower alkoxyl group, a  
7 lower alkylthio group, a lower alkylsulfinyl group or a  
8 lower alkylsulfonyl group, and at the other positions  
9 by 1 or 2 substituents selected from halogen atoms,  
10 lower alkoxyl groups, lower alkylthio groups, lower  
11 alkylsulfinyl groups and lower alkylsulfonyl groups; R<sup>3</sup>  
12 represents a hydrogen atom, a lower alkoxyl group, a  
13 halogenated lower alkyl group, a lower cycloalkyl  
14 group, a phenyl, pyridyl or phenyloxy group which may

15 be substituted by 1 to 3 substituents selected from  
 16 halogen atoms, lower alkyl groups, lower alkoxyl  
 17 groups, carboxyl group, lower alkoxycarbonyl groups,  
 18 nitro group, amino group, lower alkylamino groups and  
 19 lower alkylthio groups, a substituted or unsubstituted  
 20 piperidino, piperidyl, piperazino or morpholino group,  
 21 a substituted or unsubstituted aminocarbonyl group, or  
 22 a lower alkylcarbonyl group; and A represents a linear  
 23 or branched lower alkylene group having 1 to 6 carbon  
 24 atoms or a linear or branched alkenylene group having 2  
 25 to 9 carbon atoms.

1 4. A pyridazine derivative or a salt thereof ac-  
 2 cording to claim 1, which is a compound represented by  
 3 the following formula (1A):



5 wherein R<sup>4</sup> represents a linear or branched lower alkyl  
 6 or lower alkenylene group, a lower cycloalkyl group or a  
 7 lower cycloalkylmethyl group, and X represents an  
 8 oxygen atom or a sulfur atom; or a salt thereof.

1           5. A pyridazine derivative or a salt thereof ac-  
2     cording to claim 1, which is 5,6-bis(4-methoxyphenyl)-  
3     2-ethyl-2H-pyridazin-3-one, 5,6-bis(4-methoxyphenyl)-2-  
4     methyl-2H-pyridazin-3-one, 5,6-bis(4-methoxyphenyl)-2-  
5     isopropyl-2H-pyridazin-3-one, 5,6-bis(4-methoxyphenyl)-  
6     2-isobutyl-2H-pyridazin-3-one, 2-allyl-5,6-bis(4-  
7     methoxyphenyl)-2H-pyridazin-3-one, 5,6-bis(4-methoxy-  
8     phenyl)-2-cyclopropyl-2H-pyridazin-3-one, 5,6-bis(4-  
9     methoxyphenyl)-2-cyclopropylmethyl-2H-pyridazin-3-one,  
10    5,6-bis(4-methoxyphenyl)-2-cyclopropylmethyl-2H-  
11    pyridazine-3-thione, 5,6-bis(4-methoxyphenyl)-2-  
12    cyclopentyl-2H-pyridazin-3-one, 5,6-bis(4-methoxy-  
13    phenyl)-2-cyclopentylmethyl-2H-pyridazin-3-one, 5,6-  
14    bis(4-methoxyphenyl)-2-(4-chlorocinnamyl)-2H-pyridazin-  
15    3-one, 5-(4-chlorophenyl)-6-(4-methylthiophenyl)-2-  
16    benzyl-2H-pyridazin-3-one, 5,6-bis(4-methoxyphenyl)-2-  
17    benzyl-2H-pyridazine-3-thione, or 5,6-bis(3-fluoro-4-  
18    methoxyphenyl)-2-ethyl-2H-pyridazin-3-one; or a salt  
19    thereof.

1           6. A medicine comprising, as an effective in-  
2     gredient, a pyridazine derivative or a salt thereof ac-  
3     cording to any one of claims 1-5.

1           7. A medicine according to claim 6, which is an  
2     interleukin-1 $\beta$  production inhibitor.

1           8. A medicine according to claim 6, which is a

2 preventive or therapeutic for a disease caused by  
3 stimulation of interleukin- $1\beta$  production.

1 9. A medicine according to claim 6, which is a  
2 preventive or therapeutic for an immune system disease,  
3 an inflammatory disease, an ischemic disease, osteo-  
4 porosis or ichorrhemia.

1 10. A medicine according to claim 6, which is a  
2 preventive or therapeutic for rheumatism, arthritis or  
3 inflammatory colitis.

1 11. An interleukin- $1\beta$  production inhibitor com-  
2 prising, as an effective ingredient, a pyridazine  
3 derivative or a salt thereof according to any one of  
4 claims 1-5.

1 12. A pharmaceutical composition comprising a  
2 pyridazine derivative or a salt thereof according to  
3 any one of claims 1-5 and a pharmaceutically acceptable  
4 carrier.

1 13. Use of a pyridazine derivative or a salt  
2 thereof according to any one of claims 1-5 as a medi-  
3 cine.

1 14. A method for the treatment of a disease  
2 caused by stimulation of interleukin- $1\beta$  production,  
3 which comprises administering a pyridazine derivative  
4 or a salt thereof according to any one of claims 1-5.